



213.1077-CR-1614

UNITED STATES PATENT AND TRADEMARK OFFICE

Examiner: Unknown Art Unit: 1614
Re: Application of: CHOE, Y.H., et al.
 Serial No.: 10/078,730
 Filed: February 19, 2002
 For: **TERMINALLY-BRANCHED
POLYMERIC LINKERS AND
POLYMERIC CONJUGATES
CONTAINING THE SAME**

INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner
for Patents
Washington, D.C. 20231

August 8, 2002

Sir:

Pursuant to M.P.E.P. §609 and 37 C.F.R. §§1.56, 1.97-1.99, Applicants herewith submit form PTO-1449 (7 sheets) which lists references of which Applicants are aware. The Examiner is also alerted to the fact that the following related patent applications are currently pending in the United States Patent and Trademark Office: United States Patent Application Serial Nos. 10/067,930, 09/852,335, 09/758,993 and 10/078,649.

This submission does not represent that a search has been made or that no better art exists. While the term "references" is used in citing the U.S. patents called to the Examiner's attention herein, Applicants do not make any admission that each or all of them are "prior art" references within the meaning of the statutory and case law.

Applicants reserve the right to contend, where appropriate, that a patent asserted against any claim of the present application is not prior art under the facts and the law.

Applicants also reserve the right to present appropriate arguments and/or evidence to establish patentability over the references, should one or more of the references be applied against the claims of the present application.

Applicants request that the Examiner independently determine those items which the Examiner would consider the most pertinent of all the references cited herein.

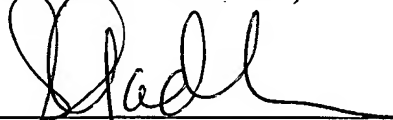
This Information Disclosure Statement is filed before the mailing date of a first Office Action on the merits. Accordingly, this document complies with the requirements of 37 C.F.R. §1.97(b).

No fee is believed to be due. Any deficiency or overpayment concerning this document should be charged or credited to Deposit Account No. 50-0217. A duplicate copy of this sheet is enclosed.

It is respectfully requested that the references cited in the accompanying PTO-1449 Form be considered and made of record.

Respectfully submitted,

ROBERTS & MERCANTI, L.L.P.



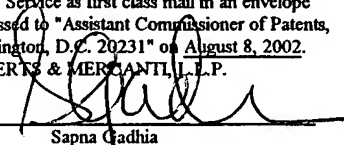
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INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

ATTY DOCKET NO.

213.1077-CRNL-U

SERIAL NO.

10078,730

Choe, Y. H., et al.

FILING

02/19/2002

GROUP

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	A1	5,965,119	10/12/99	Greenwald, et al.			12/30/97
	A2	5,130,126	07/14/92	Koyama, et al.			03/28/91
	A3	5,994,517	11/30/99	Ts'o, et al.			11/22/96
	A4	6,039,931	03/21/00	Schmitt-Willich, et al.			10/06/94
	A5	6,020,373	02/01/00	Schellenberg, et al.			04/21/97
	A6	5,885,548	03/23/99	Maier, et al.			11/30/95
	A7	5,756,825	05/26/98	Safavy, et al.			04/16/93
	A8	4,943,579	07/24/90	Vishnuvajjala, et al.			10/06/87
	A9	5,283,339	02/01/94	Arnold, et al.			08/05/92
	A10	5,433,886	07/18/95	Sherbondy, et al.			05/07/92
	A11	5,643,575	07/01/97	Martinez, et al.			10/27/93

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		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
	A12	WO 99/45964	09/16/99	PCT				
	A13	WO 96/23794	08/08/96	PCT				
	A14	WO 81/01145	04/30/81	PCT				
	A15	WO 93/24476	12/09/93	PCT				
	A16	WO 95/10304	04/20/95	PCT				

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	A17	Guiotto, Andrea, et al., An Improved Procedure for the Synthesis of Branched Polyethylene Glycols (PEGs) with the Reporter Dipeptide Met-Beta-Ala for Protein Conjugation, Bioorganic & Medicinal Chemistry Letters, volume 12, pgs. 177-180 (2002).
	A18	Ranganathan, D., et al. Synthesis of Totally Chiral, Multiple Armed, Poly Glu and Poly Asp Scaffoldings on Bifunctional Adamantane Core, Tetrahedron Letters, Volume 38, Number 7, p. 1265-68 (1997).

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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	A19	5,646,159	07/08/97	Wall, et al.			07/20/94
	A20	5,679,852	10/21/97	Platzek, et al.			06/02/95
	A21	5,583,206	12/10/96	Snow, et al.			11/28/94
	A22	5,693,310	12/02/97	Gries, et al.			11/19/90
	A23	5,454,954	10/03/95	Alfano, et al.			11/02/94
	A24	5,569,720	10/29/96	Mongelli, et al.			07/27/95
	A25	5,547,981	08/20/96	Greenwald, et al.			02/17/94
	A26	5,622,986	04/22/97	Greenwald, et al.			10/19/94
	A27	4,179,337	12/18/79	Davis, et al.			07/28/77
	A28	5,183,660	02/02/93	Ikeda, et al.			08/15/91
	A29	5,489,589	02/06/96	Wittman, et al.			12/07/94

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							YES	NO
	A30	WO 98/13059	04/02/98	PCT				
	A31	WO 01/09139 A1	02/08/01	PCT				
	A32	WO 96/22277	07/25/96	PCT				
	A33	WO 99/30727	06/24/99	PCT				

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	A34	Twyman, L.J., et al., The Synthesis of Water Soluble Dendrimers, and their Application as Possible Drug Delivery Systems, Tetrahedron Letters, Volume 40, p. 1743-46 (1999).
	A35	Greenwald, R.B., Review Oncologic, Endocrine & Metabolic Drug Delivery Systems: anticancer prodrugs and their polymeric conjugates. Exp. Opin. Ther. Patents (1997) 7(6): 601-609

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*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	A36	5,498,729	03/12/96	Domb			02/22/93
	A37	5,614,549	03/25/97	Greenwald, et al.			01/30/95
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	A39	6,113,906	09/05/00	Greenwald, et al.			12/29/98
	A40	5,605,976	02/25/97	Martinez, et al.			05/15/95
	A41	5,561,119	10/01/96	Jacquesy, et al.			04/29/92
	A42	5,349,001	09/20/94	Greenwald, et al.			01/19/93
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	A47	Cerny, L. C., et al., A Potential Blood Substituted from A Tetronic Polyol And A Modified Hemoglobin, Art. Cells & Immob. Biotech., 20(1), 71-93 (1992)
	A48	Ohya, Y., et al., Synthesis and Cytotoxic Activity of Conjugates of Monomethoxy-Poly-(ethylene glycol) End- Capped with Doxorubicin via Ester, Amide, or Schiff's Base Bond, Journal of Bioactive and Compatible Polymers Vol. 10 Jan., 1995, 51-66

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U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
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	A50	5,710,135	01/20/98	Leenders, et al.			05/24/96
	A51	5,382,657	01/17/95	Karasiewicz, et al.			08/26/92
	A52	5,614,549	03/25/97	Greenwald, et al.			01/30/95
	A53	5,840,900	11/24/98	Greenwald, et al.			08/20/96
	A54	6,005,002	12/21/99	Springer, et al.			01/19/96

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	A55	Shearwater Polymers, Inc., Catalog Polyethylene Glycol Derivatives, 1997-1998
	A56	Williams, Matthew A., and Henry Rapoport, Synthesis of Enantiomerically Pure Diethylenetriaminepentaacetic Acid Analogues, J. Org. Chem. 1193, 58, 1151-1158

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		Applicant(s) Choe, Y.H., et al.	
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*EXAMINER INITIAL	OTHER DOCUMENTS	(Including Author, Title, Date, Pertinent Pages, Etc.)
A57		Zalipsky, S., C. Gilon and A. Zilkha, Attachment of Drugs to Polyethylene Glycols, <i>Eur. Polym. J.</i> , Vol. 19, No. 12, pp. 1177-1183, 1983
A58		Shearwater Polymers, Inc., Quarterly Newsletter, March 1998
A59		Ouchi, T., et al., Synthesis and Antitumor Activity of Poly(Ethylene Glycol)s Linked to 5-Fluorouracil via a Urethane or Urea Bond. <i>Drug Design & Discovery</i> , 1992, Vol. 9, pp. 93-105
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A61		Maeda H., et al., Tumor vascular permeability and the EPR effect in macromolecular therapeutics: a review, <i>Jour. of Controlled Release</i> 65 (2000) pages 271-284
A62	✓	Greenwald, Richard B., et al., Drug Delivery Systems Based on Trimethyl Lock Lactonization: Poly(ethylene glycol) Prodrug of Amino-Containing Compounds, <i>Journal of Medicinal Chemistry</i> , Volume 43, Number 3, pages 475-487 (2000)
A63	✓	de Bont, Dries B.A., et al., Synthesis and Biological Activity of B-Glucuronyl Carbamate-Based Prodrugs of Paclitaxel as Potential Candidates for ADEPT, <i>Bioorganic & Medicinal Chemistry</i> , Volume 5, Number 2, pages 405-414 (1997)
A64	✓	Shearwater Polymers, Inc., Catalog- Polyethylene Glycol Derivatives, Star PEGS and Branched PEGS & Sulfhydryl Selective PEGS, 1997-1998; p.8,33
A65	✓	Leenders, R.G.G., et al., Highly Diastereoselective Synthesis of Anomeric B-O-Glycopyranosyl Carbamates from Isocyanates, <i>Synthesis</i> , November 1996; pp 1309-1312
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A67		Waldmann, H., et al., Synthesis of the Palmitoylated and Farnesylated C-Terminal Lipoheptapeptide of the Human N-Ras Protein by Employing an Enzymatically Removable Urethane Protecting Group, <i>Angew. Chem Int. Ed.</i> 1995, 34, No.20, pp. 2259-2262
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Docket Number (Optional)

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Application Number

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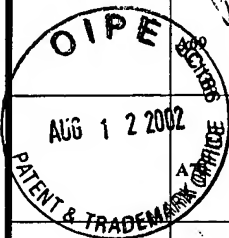
Group Art Unit

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| A71 | Cari, P.L., et al., A Novel Connector Linkage Applicable in Prodrug Design, J. Med. Chem., Vol. 24, No. 5, 479-480 (1981) |
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| A73 | Amsberry, K.L. et al., The Lactonization of 2'-Hydroxyhydrocinnamic Acid Amides: A Potential Prodrug for Amines, J. Org. Chem. Vol. 54, No. 23, pp. 5867-5877 (1989) |
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| A77 | Amsberry, K., et al., Amine Prodrugs which Utilize Hydroxy Amide Lactonization. I.A. potential Esterase-Sensitive Amide Prodrug Pharmaceutical Research Vol. 8, No. 4, 1991 |
| A78 | Shan, D., et al., Prodrug Strategies Based on Intramolecular Cyclization Reactions, Journal of Pharmaceutical Sciences, July 1997, Vol. 86, No. 7, pp 765-767 |
| A79 | Brana, Miguel, et al., Synthesis of Antitumor Dendritic Imides, Bioorganic & Medicinal Letters 11 (2001) Pgs. 3027-3029 |
| A80 | Bogdanov, et al. Long-Circulating Blood Pool Imaging Agents, Advanced Drug Delivery Reviews 16 (1995) p. 335-348 |

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